In the Claims

1-11. (Canceled)

12. (New) An integrated satellite navigation receiver and communication device combination system, comprising:

a single portable device that includes a global positioning system (GPS) receiver part (302) and a communications transceiver part (304);

said GPS receiver part (302) including a GPS RF-receiver (308), a GPS digital processor and frequency generator (GPS-chip) (310), a GPS oscillator (oscGPS) (312), a lower-frequency oscillator (osc3) (314) operating at about 32-KHz, and a clock selector (316) for selecting between clock frequency choices for normal and low-power operation;

said communications transceiver part (304) including a cellphone transceiver (320), a digital signal processor (DSP) (322), a phone host CPU (324), a divider (325), and a voltage controlled oscillator (VCO) (326);

wherein, at turn-on, the GPS-chip (310) loads a default startup processor clock selection for said phone CPU (324), and a host processor clock frequency is generated by multiplying a GPS clock that is input to a numeric controlled oscillator (NCO) that can then be digitally programmed to generate any output frequency up to half of its input frequency; and

wherein, if the GPS receiver part (302) is tracking GPS satellites and solving for frequency error, it compensates such requested frequency by its computing of the error in said GPS oscillator (oscGPS) (312) to provide a more stable frequency to said VCO (326).

13. (New) The system of claim 12, wherein:

said host CPU (324) is enabled to chose different frequencies via a communication link between the host CPU (324) and said GPS-chip (310); and

said communications transceiver part (304) can request a particular output frequency, and it can control when said VCO (326) begins outputting such frequency.

14. (New) The system of claim 12, wherein:

the communications device (304) sends a request for said GPS receiver part (302) to enter said low-power mode if a low-power mode is to be engaged.

15. (New) The system of claim 12, wherein:

time is maintained with a low frequency crystal with an input from osc3 (314).

16. (New) The system of claim 12, wherein:

said GPS receiver part (302) sends interrupts to the communications transceiver part (304) that wake certain processes.

17. (New) The system of claim 12, wherein:

the GPS receiver part (302) puts itself into a sleeping, low-power mode and enables a user to decide when to use the GPS function.

18. (New) The system of claim 12, further comprising:

a variable-VCO output from said GPS receiver part (302) responsive to requests from said communications transceiver part (304) to generate particular frequencies, waveforms, and phasing.

19. (New) The system of claim 12, further comprising:

a time interval interrupt constructed from combinations of GPS-second and GPS-millisecond interrupts included in said GPS receiver part (302), with event timing being phased by using offsets.

20. (New) A method for limiting the number of crystals needed for reference oscillators when integrally combining a navigation receiver and cellphone to two, comprising:

providing a GPS oscillator with a first crystal operating at about 27-MHz;

providing a watch oscillator with a second crystal operating at about 32-KHz;

connecting a multiplier to the GPS oscillator to produce higher frequencies to operate a GPS receiver;

generating a VCO frequency with a first numeric controlled oscillator (NCO1) to operate a communications transceiver;

generating a host CPU frequency with a second numeric controlled oscillator (NCO2); and

producing time events to host CPU with logic combinations of GPS-msec interrupts, GPS-second pulses, digital offsets, and said watch oscillator.